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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/868,785	10/16/2001	Judith Reinhard	Q65015	6194

7590

07/29/2003

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EXAMINER

PAK, JOHN D

ART UNIT

PAPER NUMBER

1616

DATE MAILED: 07/29/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/868,785

Applicant(s)

REINHARD ET AL.

Examiner

JOHN D PAK

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-- The MAILING DATE of this communication appears in the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) 6,7,19-21,52,53 and 65-67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,8-18,22-27,33-38,47-51 and 54-64 is/are rejected.
- 7) ☒ Claim(s) 28-32 and 39-46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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Claims 1-67 are pending in this application.

Applicant's election with traverse of the invention of Group II, claims 1-5, 8-18, 22-51 and 54-64 *to the extent that the claims read on Formula I (e.g. claim 9)*, in Paper No. 7 (5/12/03) is acknowledged. Applicant argues that the Examiner allegedly made technical mistakes in characterizing compounds of Groups I and III. The Examiner cannot agree for the following reasons.

First, it must be noted that applicant chose to use the term "catechol" without any structural clarification. Therefore, the Examiner must interpret the claims broadly to include 1,2-benzenediol (common name: catechol) and 2-(3,4-dihydroxyphenyl)-3,4-dihydro-2H-1-benzopyran-3,5,7-triol (common name: catechol; Registry number 154-23-4). It is the latter structured compound that belongs in Group III.

Second, Group I compounds are defined as those of applicant's compounds that have at least two OR groups, each OR being attached to an aryl moiety and at least one of the R being a carbohydrate moiety. It is a mighty stretch of chemical knowledge and classification to argue that carbohydrate-containing compounds share a *significant* structural element or belong to the same recognized class of compounds as 2-(3,4-dihydroxyphenyl)-3,4-dihydro-2H-1-benzopyran-3,5,7-triol. In structural chemistry and classification, the aromatic moiety is by far the more significant moiety that controls classification, both in nomenclature and in U.S. classification. Hence, the nomenclature for beta arbutin is 4-hydroxyphenyl beta D-glucopyranoside. Applicant argues that

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hydrolysis of beta arbutin results in p-hydroquinone. However, p-hydroquinone is still structurally divergent from 2-(3,4-dihydroxyphenyl)-3,4-dihydro-2H-1-benzopyran-3,5,7-triol (Group III), and the test is not whether hydrolysis or any subsequent reaction or reactions would yield the comparative compound, but whether the two compounds/structures share a significant structural element or whether the two compounds/structures belong to a recognized class of chemical compounds. On both tests, the answer is clearly NO.

Therefore, applicant's structurally divergent compounds lack unity of invention and cannot be examined together. See also the full reasons given in the previous Office Action, Paper No. 6, pages 2-4. For these reasons, the lack of unity requirement is maintained. Claims 6-7, 19-21, 52-53 and 65-67 are withdrawn from further consideration as being directed to non-elected subject matter. Claims 1-5, 8-18, 22-51 and 54-64 will presently be examined *to the extent that they read on Formula I (e.g. claim 9)*.

Claims 28-32 are objected to under 37 CFR 1.75(c), as being of improper dependent form because a multiple dependent claim cannot serve as a basis for another multiple dependent claim. See MPEP 608.01(n). Accordingly, claims 28-32 have not been further treated on the merits.

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Claims 39-46 provide for the use of a compound having two OR groups, but since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 39-46 are rejected under 35 USC 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 USC 101. See for example Ex parte Dunki, 153 USPQ 678 (Bd. App. 1967) and Clinical Products, Ltd. v. Brenner, 255 F.Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Consequently, claims 39-46 will not be further examined on the merits because they are directed to non-statutory class of invention ("use of" is not a recognized statutory class of invention).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in this United States.

Claims 1-5, 8-15, 17-18, 22, 35-38, 47-51, 54-61 and 63-64 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 57-38339.

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JP 57-38339 explicitly discloses two types of phenyl-based compounds that contain two OR groups (OR^1 and OR^2), each of which R^1 and R^2 may be H or methyl, and a third substituent R^3 that is H or lower alkyl. See first page, column 1, second page, column 3, third page, columns 8-10; see also the enclosed English abstract (JPAB abstract, JP358157703A). The total number of compounds that result is small, and the encompassed compounds read on compounds set forth in applicant's elected claims except for applicant's claims 16 and 62. The compounds disclosed in JP 57-38339 are disclosed as the active constituent of termite controlling agents. The compounds cause abnormality in the antennae of the termites, loss of living functions, damages in the legs, or reduction in the sensitivity to odor or heat.

The claims are thereby anticipated. Although the compounds disclosed by the cited reference are not expressly taught as feeding stimulants, because the very same exact compounds are applied to the same termites, the same end result must necessarily be obtained. The termite does not have a choice in how it responds to a given chemical. When termites were given the compounds in JP 57-38339 (which has substantial overlap with compounds of Formula I), the termites would have responded the same way no matter what the inventors of the cited reference thought or understood. The same compound applied to the same insect would necessarily produce the same end result.

Claim language such as those in claims 4 and 5 are noted ("precursor" and "hydrolysed to"), but the teachings of the cited reference still meet such features. For example, guaicol has an OCH_3 group, which is a "precursor" to the OH group and which can be hydrolyzed to said OH group to provide catechol.

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Claims 35-38 are directed to the compounds per se, and the compounds encompassed by the elected-and-examined portion of claims 35-38 have been explicitly disclosed by the cited reference. Again, the compounds have been explicitly disclosed, so it does not matter whether the reference deems it to have one property and applicant recite them as compounds having another property. A compound and its properties are the same and indivisible in the absence of further distinguishing features.

For these reasons, the claims are anticipated.

Claims 1, 8-18 and 35-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Meyer et al. (J. Insect Physiol., 1974, Vol. 20, pp. 2015-21).

Meyer et al. explicitly disclose a composition that contains ethanol and 1,2-dihydroxybenzene (catechol), 1,3-dihydroxybenzene (resorcinol), or 1,4-dihydroxybenzene. See page 2016, under "MATERIALS AND METHODS." The composition and compounds are explicitly disclosed; and the claims are thereby anticipated. Any new property found by applicant must necessarily be present in the prior art compositions that contain the same exact compounds and a common solvent such as ethanol.

Claims 1, 8-14, 16-18, 25-27 and 35-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Springer (US 4,045,554).

Springer explicitly discloses wood chips that have been treated with 0.35% hydroquinone or 0.35% resorcinol (column 3, lines 3-16). The phenols are taught as preservatives, which inhibit the growth of bacteria and fungi on the treated chips (column 2, lines 13-34).

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The claims are thereby anticipated, because the prior art phenol-treated wood chips must necessarily possess the properties now claimed by applicant since the wood chips have been treated with the same exact phenol compounds as applicant's invention.

Claims 1, 8-15, 17-18, 22-26, 35-38, 47, 54-61 and 63-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Derwent abstract 1991-183187 (abstracting JP 3-112903).

Derwent abstract 1991-183187 explicitly discloses the use of hydroquinone or catechol + cellulose in a termite trail-marking pheromone composition. Prevention and control of termites are disclosed. The hydroquinone or catechol is disclosed as a stabilizing agent for dodecatrienol.

While the cited reference does not expressly disclose the hydroquinone or catechol as a termite feeding stimulant or attractant, such properties must necessarily have been present in the disclosed mixture of dodecatrienol + hydroquinone/catechol + cellulose. Termites would have been guided by the dodecatrienol and feeding stimulating or further attracting activity would have been obtained since hydroquinone and catechol are the same exact compounds of Formula I (except for the limitation of claim 16). The claims are thereby anticipated.

Claims 1, 8-14, 17-18, 25-27, 33-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Chemical Abstracts 77:44349 (abstracting DE 2149933).

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Chemical Abstracts 77:44349 explicitly discloses blotting paper that is impregnated with an insecticide (Reg. No. 62-73-7, which is the well known insecticide dichlorovos) and hydroquinone. A polymer coating is also disclosed.

While the cited reference does not expressly disclose the hydroquinone as a termite feeding stimulant, such property must necessarily have been present since the hydroquinone in the cited reference is specifically encompassed by applicant's Formula I (except for the limitations of claims 15-16). Additionally, while dichlorovos is not specifically mentioned as a chitin synthesis inhibitor or insect growth regulator, such effect would clearly accompany an insecticidal agent that kills the insects. The claims are thereby anticipated.

Applicant is advised that the copy of the claims in this case shows claim 54 to be somewhat illegible at the end of line 2. The Examiner assumed that the text there is the same as in claim 8. An amendment to claim 54 should be made to present it in legible form.

Applicant is also advised that the IDS of 6/21/01 was not accompanied by copies of the references. The Examiner could not obtain copies of all the references in time for the preparation of this Office Action, but a thorough electronic database search has been conducted to ensure all relevant prior art has been reviewed. While the Examiner will attempt to obtain copies of the references in said IDS, it would be appreciated if applicant could provide copies of documents that are not readily available, such as the Australian document AU 10625/83, Aldrich catalog, Kodak catalog, and Sigma catalog. The International Bureau will be contacted for copies, but

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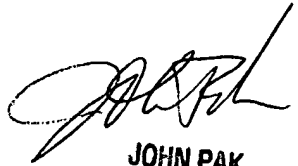
applicant's cooperation will ensure that all references will have been specifically considered in time for the next Office action.

A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier numbers for accessing the facsimile machines are (703) 308-4556 or (703) 305-3592.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Pak whose telephone number is (703) 308-4538. The Examiner can normally be reached on Monday through Friday from 7:30 AM to 4 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Thurman Page, can be reached on (703) 308-2927.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1235.


JOHN PAK
PRIMARY EXAMINER
GROUP 1616